

## CLAIMS

1. A stereophonic sound field reproducing apparatus for reproducing a stereophonic sound field, the apparatus comprising:

5 a plurality of sound wave output units arranged around a head of a user at the time of using, each of the sound wave output unit receives signals and outputs sound waves; and

10 a first signal processing unit which processes signals to be supplied to the sound wave output units so as to simultaneously correct the signal based on the characteristics between the sound wave output units and the head of the user and the characteristics between the sound wave output units.

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2. The stereophonic sound field reproducing apparatus according to claim 1, further comprising a holding unit, to be attached to the head of the user at the time of using, which holds the sound wave output units at the circumference  
20 of the head of the user.

3. The stereophonic sound field reproducing apparatus according to claim 1,

25 wherein at least four sound wave output units are provided, and

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the four sound wave output units are arranged in the vicinity of the ears of the user in such a manner that at least two sound wave output units are provided in the vicinity of each ear.

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4. The stereophonic sound field reproducing apparatus according to claim 1, further comprising a plurality of detection units, arranged in positions or their vicinities where a relationship with a head of human body or simulation units simulating human body is the same as a relationship between the head of the user and the sound wave output units at the time of recording, which detect a sound field and generate signals to be supplied to the sound wave output units.

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5. The stereophonic sound field reproducing apparatus according to claim 1, further comprising a second signal processing unit which executes a process on the signals to be supplied to the sound wave output units using characteristics from a position where a sound image is fixed to vicinities of the sound wave output units.

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6. The stereophonic sound field reproducing apparatus according to claim 1,

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wherein at least eight sound wave output units are

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provided,

the eight sound wave output units are arranged in the vicinity of the ears of the user in such a manner that at least four sound wave output units are provided in the vicinity of each ear, and

the four sound wave output units provided in the vicinity of each ear are provided in such a manner that they are positioned at apexes of a triangular pyramid.

7. The stereophonic sound field reproducing apparatus according to claim 1,

wherein the first signal processing unit corrects characteristics between all of the sound wave output units and the head of the user and characteristics between all of the sound wave output units simultaneously.

8. The stereophonic sound field reproducing apparatus according to claim 1,

wherein, out of the sound wave output units, a desired number of sound wave output units are provided in the vicinity of one ear of the user and the remaining sound wave output units are provided in the vicinity of the other ear, and the first signal processing unit includes,

a third signal processing unit which corrects characteristics between all the sound wave output units

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corresponding to the one ear and the head of the user and characteristics between all the sound wave output units corresponding to the one ear; and

5 a fourth signal processing unit which corrects characteristics between all the sound wave output units corresponding to the other ear and the head of the user and characteristics between all the sound wave output units corresponding to the other ear, and

10 the third and fourth signal processing units execute the signal process simultaneously.

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